

53883-73

5-23-2013

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460-0001



OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

S-23-13

Ann Turnbough, Ph.D
Control Solution, Inc.
5903 Genoa-Red Bluff
Pasadena, TX 77507-1041

Subject: Amended Reregistration Label
Product Name: Permethrin 2.3 E.W.C.
EPA Registration Number: 53883-73
EPA Decision Number(s): D413286

Dear Dr. Turnbough

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all of the information submitted with your application to support the reregistration of the above referenced product in connection with the Permethrin RED(s), and has concluded that your submission is acceptable.

NOTE: This product is not being reregistered under sections 3(c)5 and 4(g) of FIFRA at this time.

Please note that the record for this product currently contains the Confidential Statements of Formulation (CSFs) listed below. Any previously dated CSFs are superseded.

- Basic CSF, dated [August 6, 2002]

A copy of your label stamped "Accepted" is enclosed along with copies of the acute toxicity and product chemistry reviews completed for the subject product. Products shipped after 12 months from the date of this amendment or the next printing of the label whichever occurs first, must bear the new revised label. Your release for shipment of the product bearing the amended label constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e).

If you have any questions about this letter, please contact Dani Daniel at (703)305-5409 or via e-mail at daniel.dani@epa.gov

Sincerely,



Richard J. Gebken
Product Manager (10)
Insecticide Branch
Registration Division (7504P)

Enclosures: Label stamped "Accepted," dated 5/23/2013
Acute Toxicity Review, dated (September 26, 2012)
Product Chemistry Review, dated (February 15, 2013)

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ACCEPTED
5-23-13
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 53883-73

Revised label per EPA letter dated May 23, 2013

RESTRICTED USE PESTICIDE
Due to Toxicity to Fish and Aquatic Invertebrates.
For retail sale and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification. Direct supervision for this product requires the certified applicator to review federal and supplemental label instructions with all personnel prior to application, mixing, loading, or repair or cleaning of application equipment.

Permethrin

3.2 E.W.C.

Intended For Use By Commercial, Industrial and Agricultural Personnel

[Optional proposed text appears in brackets - the final label may include some or all of the optional text]

- [• Kills Termites*[including dry-wood termites](for localized control only)]
- [• For Use around foundations, outside buildings, porches, wood piles, wooden fences and decks, patios]
- [• Kills troublesome outdoor insects which destroy Lawns, Roses, Flowers, Trees and Shrubs, Vegetables, Fruits, and Nuts]
- [• Provides contact and residual control for up to 4 weeks]
- [• Indoor/Outdoor Insecticide]
- [• Water Based]
- [• Protects your Lawns, Trees & Shrubs, Roses & Flowers, Fruits & Nuts, and Vegetables from: Alfalfa loopers, Ants, Aphids, Armyworms, Bagworms, Beetles, Borers, Brown dog ticks, Budworms, Cabbageworms, Chinch bugs, Cicadas, Citrus black flies, Cluster flies, Codling moths, Corn earworms, Crickets, Cutworms, Earwigs, Elm spanworms, Fall cankerworms, Fire Ants, Fleas, Green fruitworms, Gnats, Grasshoppers, Houseflies, Inchworms, Japanese beetles, Leafhoppers, Leafminers, Leafrollers, Lone Star ticks, Lygus bugs, Mealybugs, Millipedes, Mole crickets, Mosquitoes, Moths, Navel orangeworms, Scales, Sod webworms, Sowbugs (pillbugs), Spider mites, Spring cankerworms, Tent caterpillars, Thrips, Tobacco budworms, Weevils, Whiteflies and many others.

Not for broadcast use on indoor residential surfaces.

ACTIVE INGREDIENT:	
Permethrin	3.20%
OTHER INGREDIENTS:	<u>96.80%</u>
TOTAL:	100.00%

This product contains 0.267 pounds active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN

CAUTION

[See [inside] [attached] [booklet] [side] [back] [panel] for additional [First Aid] [Precautionary Statements] [Directions for Use] and [Storage and Disposal] instructions.]

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Revised label per EPA letter dated May 23, 2013

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

CAUTION: Harmful if swallowed. Wash thoroughly with soap and water after handling.

FIRST AID	
If swallowed	<ul style="list-style-type: none"> • Call poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
HOTLINE NUMBER	
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information on this product, contact the National Pesticide Information Center, 1-800-858-7378, Monday-Friday, 7:30 AM-3:30 PM PST. You may also contact the National Poison Control Center, 1-800-222-1222, day or night, for emergency medical treatment information [or SafetyCall® at (866) 897-8050].</p> <p>FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident call CHEMTREC 1-800-424-9300.</p>	
<p>NOTE TO PHYSICIAN AND VETERINARIANS: Do not administer or instill milk, cream or other substances containing vegetable or animal fats which will enhance absorption of lipophilic substances.</p>	

Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, or viton. If you want more options, follow the instructions for category E on an EPA chemical resistance category section chart.

All mixers, loaders, applicators and other handlers must wear:

- Long-sleeved shirt and long pants,
- Shoes plus socks,
- Chemical-resistant gloves for all handlers except for applicators using motorized ground equipment, pilots and flaggers.
- Chemical-resistant apron for mixers/loaders, persons cleaning equipment, and persons exposed to the concentrate and for handlers performing animal dip.

See engineering controls for additional requirements.

Engineering Controls Statements:

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6)] the handler PPE requirements may be reduced or modified as specified in the WPS.

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User Safety Requirements

- Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.
- Discard clothing and other absorbent materials that have been drenched or heavily contaminate with this product's concentrate. Do not reuse them.

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to aquatic organisms, including fish and invertebrates. Do not apply directly to water or areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

Under some conditions, it may also have a potential for transport into surface water in runoff (primarily absorbed to suspended soil particles), for several months or more after application. These include poorly draining or wet soil with readily visible slopes toward adjacent surface waters, frequently flooded areas, and areas overlying extremely shallow groundwater, areas with field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas overlying tile drainage systems that drain to surface waters.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively, visiting the treatment area.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame. Do not use in undiluted form.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

READ ENTIRE LABEL BEFORE USE

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

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Revised label per EPA letter dated May 23, 2013

USE RESTRICTIONS:

Except when applying to livestock, do not enter or allow others to enter treated area until sprays have dried.

Except when applying to livestock, do not apply this product in a way that will contact workers or other persons, either directly or through drift.

Except when applying to livestock, only protected handlers may be in the area during application.

Do not breathe dust, vapors or spray mist.

Do not apply when food is present.

Do not use in food areas of food handling establishments, restaurants, or other areas where food is commercially prepared or processed. Do not use in serving areas while food is exposed or facility is in operation. Serving areas are areas where prepared food are served, such as dining rooms, but excluding areas where foods may be prepared or held. In the home, all food processing surfaces and utensils should be covered during treatment or thoroughly washed before use.

Exposed food should be covered or removed.

When used in dairy barns or facilities: Close milk bulk tank lids to prevent contamination from spray and from dead or falling insects. Remove or cover milking utensils before application. Wash teats of animals before milking.

Not for broadcast use on indoor surfaces.

Not for use in commercial animal premise automatic misting systems.

All outdoor applications must be limited to spot or crack-and-crevice treatments only, except for the following permitted uses:

1. Treatment to soil or vegetation around structures;
2. Applications to lawns, turf, and other vegetation;
3. Applications to building foundations, up to a maximum height of 3 feet.
4. Applications to underside of eaves, soffits, doors, or windows permanently protected from rainfall by covering, overhang, awning, or
5. Applications around potential pest entry points into buildings, when limited to a surface band not to exceed one inch in width.
6. Applications made through the use of a coarse, low pressure spray to only those portions of surfaces that are directly above bare soil, lawn turf, mulch, or other vegetation, as listed on this label, and not over an impervious surface, drainage, or other condition, that would result in runoff into storm drains, drainage ditches, gutters, or other surface waters, in order to control occasional invaders or aggregating pests.
7. Other than applications to building foundations, all outdoor applications to impervious surfaces such as sidewalks, driveways, patios, porches and structural surfaces (such as windows, doors and eaves) are limited to spot and crack-and-crevice applications, only.

Do not water the treated area to the point of runoff.

Do not make applications during rain.

Application is prohibited directly into sewers or drains, or to any area like a gutter where drainage to sewers, storm drains, water bodies, or aquatic habitat can occur. Do not allow the product to enter any drain during or after application.

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Revised label per EPA letter dated May 23, 2013

Not for use in outdoor residential misting systems.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, wear:

- Coveralls
- Shoes plus socks
- Chemical-resistant gloves made of any waterproof material.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not allow children or pets to contact treated surfaces until spray has dried.

SHAKE WELL BEFORE USING

RESISTANCE MANAGEMENT

Permethrin 3.2 E.W.C. contains a Group 3 Insecticide. With repeated use of Group 3 insecticide as the primary method of control in the same field or in successive years, insect/mite populations can develop resistant biotypes. If this occurs, insect/mite biotypes with acquired resistance to Group 3 insecticides may eventually dominate the insect/mite population. This may result in partial or total loss of control of those species by Permethrin 3.2 E.W.C. or other Group 3 insecticides.

To delay development of insecticide resistance, the following practices are suggested:

- Base insecticide applications on comprehensive IPM programs. This program should include an insect management program that includes cultural and biological control where possible.
- Use good resistance management strategies established for the use area. This may include the use of insecticide rotations or tank mixes with other groups of insecticide and miticides in an IPM program.

Revised label per EPA letter dated May 23, 2013

- Always apply Permethrin 3.2 E.W.C. at the labeled rates and according to label directions. Do not use less than label rates alone or in tank mixtures unless directed otherwise in supplemental labeling supplied by Control Solutions, Inc.
- Monitor treated populations in the field for loss of control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain may be present. Immediately consult your local Control Solutions, Inc. representative or agricultural advisor for the best alternative method of control for your area.
- Do not treat seedling plants grown for transplant in greenhouses, shade houses, or field plots.
- Consult your local extension specialist, certified crop advisor, and/or manufacturer for insecticide resistance management and /or IPM guidance for the specific site and resistant pest problems.

Vegetative Buffer Strip

Construct and maintain a minimum 10-foot-wide vegetative filter strip of grass or other permanent vegetation between the field edge and down gradient aquatic habitat (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries; and commercial fish farm ponds).

Only apply products containing this product onto fields where a maintained vegetative buffer strip of at least 10 feet exists between the field and down gradient aquatic habitat.

Buffer Zone for Ground Application (ground boom, overhead chemigation, or airblast)

Do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, marshes, natural ponds, estuaries, and commercial fish ponds.)

Spray Drift Management for Agricultural Crops

Wind Direction and Speed

Only apply this product if the wind direction favors on-target deposition. Do not apply when wind velocity exceeds 15 mph.

Temperature Inversions

Do not make aerial or ground applications into temperature inversions. Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

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Revised label per EPA letter dated May 23, 2013

Droplet size

Use only Medium or coarse spray nozzles (for ground and non-ULV aerial application) according to ASAE (S572) definition for standard nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

Additional Requirements for Ground Application

- Wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application.
- For ground boom applications, apply using a nozzle height of no more than 4 feet above the ground or crop canopy.
- For airblast applications, turn off outward-pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

THREE STEPS TO MIX AND APPLY:

1. For lawns and vegetables, measure the area to be sprayed. Calculate square feet by multiplying length by width. For all other applications, apply as a thorough cover spray.
2. Use a clean sprayer. Carefully measure and mix the amount of concentrate and water as directed.
3. Spray as directed. Thorough coverage is important. Flush sprayer with clean water after each use. Make applications when insects first appear. Repeat applications as directed.

Use Dilution rate as indicated:

1 fl. oz. = 6 tsp. or 2 Tbsp.

8 fl. oz. = ½ pt. or 1 cup

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APPLICATION INSTRUCTIONS

HOME LAWNS

Turf	Pests	How to Use
Bentgrass, Bermudagrass, Bluegrass, Dichondra, Fescue, Irish Moss, Merion, St. Augustine Grass	Ants, Armyworms, Brown dog ticks, Chinch bugs, Crickets, Cutworms, Fleas, Grasshoppers, Japanese beetle grubs, Mole crickets, Sod webworms, Ticks that carry Lyme Disease, Leafhoppers	<p>Thoroughly wet down grass a few hours before applying. Home lawns should be no taller than 3 inches at time of application. Slightly more water may be used as long as the amount of product per area is as listed below. For heavy infestations, repeat application after 2 weeks.</p> <p>For ants, crickets and grasshoppers, use 1½ fl. oz. in 3 gals. of water to cover 1,000 sq. ft.</p> <p>For other listed insects, use 4-2/3 fl. ozs. in 10 gals. of water to cover 1,000 sq. ft.</p>

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TREES & SHRUBS

Trees & Shrubs	Pests	How to Use
Arizona, Cypress, Azalea, Birch, Cherry, Non-bearing Citrus, Conifers, Elm, English Ivy, Euonymus, Weeping Fig, Fir, Honeysuckle, Lilac, Mock-orange, Oak, Palm, Philodendron, Pine, Poinsettia, Tulip Poplar, Rhododendron, Taxus	Aphids, Bagworms, Cicadas, Exposed thrips, Fall cankerworms, Inchworms, Leafminers, Leafrollers, Mealybugs, Spider mites, Whiteflies, Gypsy Moth, Tent Caterpillar, Japanese Beetles	Use ¾ fl. oz. in 1 gal. of water. Use sufficient spray to obtain full and uniform coverage. Avoid spraying to the point of runoff. Try to cover underside of leaves and penetrate dense foliage. Spray in the late afternoon or evening, when the temperature ranges from 50°-75°F and when there is little or no wind. Spray at the first sign of insects.
Cherry, Honeysuckle	Fall webworms	Application can be made up to the day of collection.
Conifer	Budworms	Tent caterpillars: Application should be made when caterpillars are young and tents are first noticed. For best results, apply in the late afternoon or evening, when caterpillars have returned to their tents. Wet tents with spray on all sides. A few caterpillars may be seen escaping from the tent; however, they should die within several hours.
Elm	Elm leaf beetles, Elm spanworms, Fall webworms	
Douglas and Grand Firs	Tussock moths	
Non-bearing Citrus	Citrus black flies	
Oak	Oakworms	
Pine	Pine beetles, Pine moths, Pine needle miners, Needle scales	

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ROSES & FLOWERS (ORNAMENTALS)

Roses & Flowers (Ornamentals)	Pests	How to Use
<p>Ageratum, Aster, Ardisia, Azalea, Baby's breath, Begonia, Birds-nest fern, Bleeding heart, Carnation, Chrysanthemum, Coleus, Common Ninebark and Snowberry, Crown of thorns, Cockscomb, Cyclamen, Dracaena, Dumbcane, English Ivy, Exacum, Fuchsia, Gladiolus, Grape Ivy, Gold bells, Hypoestes, Ivy, Juniper, Lilac, Marigold, Mock-Orange, Nannyberry, Orchid, Palm, Pansy, Pea shrub, Peperomia, Petunia, Philodendron, Piggy-back Plant, Poinsettia, Portulaca, Pothos, Prayer Plant, Purple Passion, Rabbits foot fern, Rhododendron, Rose, Schefflera, Snapdragon, Snake Plant, Statice Velvet Plant, Verbena, Zinnia</p>	<p>Aphids, Armyworms, Bagworms, Cabbage worms, Cicadas, Cornworms, Cutworms, Exposed thrips, Fall cankerworms, Fall webworms, Fungus gnat, Inchworms, Japanese beetles, Leafminers, Leafrollers, Mealybugs, Scale crawlers, Spring cankerworms, Spider mites, Whiteflies, Rose Chafer, Psyllids, Scale Insects</p>	<p>Use ¼ fl. oz. in 1 gal. of water. Use sufficient spray to obtain full and uniform coverage. Avoid spraying to the point of runoff. Try to cover underside of leaves and penetrate dense foliage. Spray in the later afternoon or evening when the temperature ranges from 50^o-75^oF and when there is little or no wind. Spray at the first sign of insects. Application can be made up to the day of collection.</p>

Revised label per EPA letter dated May 23, 2013

FRUITS & NUTS TREES

Use 1½ fl. oz. in 1 gal. of water. Apply when insects appear. Use sufficient spray to obtain full and uniform coverage. Avoid spraying to the point of runoff. Try to cover underside of leaves and penetrate dense foliage.

Fruits & Nuts Trees	Pests	How to Use	Retreatment Interval (Days)
Almonds, Pecans	Navel orangeworms, Peach twig borers	Do not make more than 2 applications during hull split and 5 applications per season. Can be applied up to 7 days prior to harvest.	10
Apples	Green fruitworms, Aphids, Leafrollers(Oblique-banded, Redbanded), Plum curculio, Rosy apple aphids, Spotted tentiform leafminers, Tarnished plant bugs, White apple leafhoppers, Japanese Beetles	Do not make more than 3 applications. Do not apply after petal fall.	10
Peaches	Borers(Lesser peachtree, Peach twig), Green fruitworms, Plum curculio, Oriental fruit moths, Tarnished plant bugs	Do not apply within 7 days of harvest. Do not make more than 8 applications per season.	10
Pears (dormant through delayed dormant)	Pear psylla	Apply during the dormant through delayed dormant growth period only. Do not make more than 2 applications per season.	10
Pears (summer)	Codling Moths, Green fruitworms, Pear psylla, Aphids	Do not make more than 3 applications per season. Can be applied up to 14 days prior to harvest.	10

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VEGETABLES

Prepare a spray solution at the dilution rates listed for each crop in the chart below. Apply the spray solution at the rate of 1 gallon to cover 440 square feet surface area.

Vegetables	Pests	How to Use	Retreatment Interval (Days)
Asparagus (pre-harvest)	Asparagus beetles, Cutworms	Use 2½ fl. oz. in 2 gals. of water. Apply to ensure uniform coverage. Do not apply more than 4 applications per crop. Can be applied up to 3 days prior to harvest.	7
Asparagus (post-harvest)	Larval stages of asparagus beetle; Tarnished plant bugs, Lygus bugs, Adult Japanese beetle	Use 2½ fl. oz. in 2 gals. of water. Treat ferns or bush growth after spear harvest when insects are present.	7
Celery-see Leafy Vegetables			
Cole Crops: Broccoli, Brussels Sprouts, Cabbage, Cauliflower	Beet armyworms, Cabbage aphids and loopers, Diamondback moths, Imported cabbageworms	Use ¾ fl. oz. in 1 gal. of water. Apply every 5 days only as needed to maintain insect control. Can be applied up to 1 day prior to harvest. Do not make more than 8 applications on Cauliflower, Brussels Sprouts and Broccoli and 10 applications on Cabbage.	5
Corn-see Sweet Corn			
Cucumber, Melons, Pumpkins, Squash	Flea beetle, Leafhopper	Use 1½ fl. oz. in 1 gal. water. Do not make more than 8 applications per season. Can be applied up to 3 days prior to harvest.	7

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<p>Cucurbits: Balsam pear(bitter melon), Chinese waxgourd(Chinese preserving melon), citron melon, cucumber, gherkin, edible gourds; melons including hybrids such as cantaloupe, casaba, crenshaw, honeydew, honey balls, mango melon, muskmelon, Persian melon, pumpkin, summer & winter squash, watermelon</p>	<p>Aphids, Cabbage looper, Cucumber Beetle (adults), Cutworms, Leafhoppers, Leafminers, Melonworms, Pickleworm, Plant bugs, Squash bugs.</p>	<p>Use 1½ fl. oz. in 1 gal. of water. Apply to ensure uniform coverage. Can be applied up to the day of harvest.</p>	<p>7</p>
<p>Eggplant</p>	<p>Colorado potato beetles, Vegetable leafminers</p>	<p>Use 2⅓ fl. oz. in 1 gal. of water. Apply to ensure uniform coverage. Do not exceed 16 applications. Can be applied up to 3 days prior to harvest.</p>	<p>7</p>
<p>Horseradish (Foliar application)</p>	<p>Imported crucifer weevils</p>	<p>Use 2⅓ fl. oz. in 1 gal. water. Do not exceed 3 foliar applications. Can be applied up to 22 days prior to harvest.</p>	<p>10</p>

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Head Lettuce	Corn earworms, Beet armyworms, Loopers (Alfalfa, Cabbage), Tobacco budworms	Use 1½ fl. oz. in 1 gal. water. Apply every 7-10 days only as needed to maintain control. Do not make more than 10 applications per season. Can be applied up to 1 day prior to harvest.	7
Leafy Vegetables: Amaranth, Arrugula, Celery, Celtuce, Chervil, Corn salad, Chrysanthemum(edible-leaved and garland), cress(garden and upland), Dandelion, Dock, Endive, Fennel, Lettuce(head and leaf), Okra, Parsley, Purslane(garden and winter), Rhubarb, Spinach, Swiss chard	Alfalfa looper, Aphids, Beet armyworm, Cabbage looper, Corn earworm, Cutworms, European corn borer, Fall armyworm, Green cloverworm, Southern armyworm, Tobacco budworm, Vegetable leafminer.	Use 1½ fl. oz. in 1 gal. of water. Except for Celery, Lettuce and Spinach, apply every 5 to 10 days only as needed for insect control. Can be applied up to 1 day prior to harvest.	Celery - 7 Lettuce - 7 Spinach - 3
Melons-see Cucurbits			
Potatoes	Beet armyworm, Colorado potato beetle, Potato leafhopper, Potato tuberworm, Cabbage looper, Cutworms, European corn borer, Potato psyllid, Tarnished plant bug	Use 2½ fl. oz. in 2 gals. of water. Apply as needed, but not more than 12 applications. Can be applied up to 7 days prior to harvest.	10

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Peppers	Vegetable leafminers, Cabbage looper, Flea beetle, Corn earworm, Pepper weevil, European corn borer, Green cloverworms, Leafhoppers	Use 1½ fl. oz. in 1 gal. of water. Do not more than 8 applications per season. Can be applied up to 3 days prior to harvest.	5
Spinach	Beet armyworms, Corn earworms, Cabbage loopers, Cutworms, European corn borers, Green cloverworms, Leafhoppers	Use 2½ fl. ozs. in 2 gals. of water. Apply to ensure uniform coverage. Do not make more than 7 applications per season. Can be applied up to 7 days prior to harvest.	3
Strawberries, Raspberries, Blueberries	Strawberry weevils, Aphids, Spider mites, Lygus bugs, Flea beetles, Omnivorous leaftier, Spittlebugs, Japanese beetles, Field crickets, Red Spider, Leafroller, weevils	Use 1-½ fl. oz. in 1 gal. of water. Allow 14 days between last application and harvest. Make no more than 8 foliar applications per growing season.	-
Sweet Corn	Armyworms(Fall, Southern), Corn earworms, European corn borers	Use 2½ fl. oz. in 2 gals. of water. Can be applied every 3 days, but not more than 6 applications per season. Can be applied up to 1 day prior to harvest.	3
Tomatoes (Do not apply on cherry tomatoes and varieties yielding tomatoes less than one inch in diameter.)	Beet and southern armyworm, Tomato pinworm, Tomato fruitworm, Horn worms, Granulate cutworms, Colorado potato beetle, Cabbage looper	Use 2½ fl. oz. in 2 gals. of water. Apply to ensure uniform coverage. Can be applied up to day of harvest.	7

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NUISANCE PESTS IN OUTDOOR AREAS

Use 5-1/4 fl. ozs. in 1 quart of water, treating 400 linear feet with a 6-inch spray band.

OUTSIDE SURFACES OF BUILDING

Use Permethrin 3.2 E.W.C. on Ants, Clover mites, Crickets, Earwigs, Millipedes, Sowbugs (pillbugs) and spiders to help prevent infestation of buildings, treat the building foundation to a height of 2 to 3 feet, where pests are active and may find entrance. Also, apply as a residual spray to outside surfaces of building, including porches, screens, window frames, eaves, patios, garages, refuse dumps and other areas where these pests congregate or have been seen.

OTHER OUTDOOR AREAS

Use Permethrin 3.2 E.W.C. on Ants, Crickets, Earwigs, Fleas, Ticks (**including ticks that may carry Lyme Disease**) for treatment of localized infestations of these insects in areas where there are weeds or bushy non-crop areas, spray infested areas thoroughly. **For ants**, thoroughly wet hills and runways. Repeat application as reinfestations occur.

To reduce annoyance from: **Cluster flies, Flying moths, Gnats, House flies, Mosquitoes.** Spray outside surfaces of screens, doors, window frames or wherever these insects may enter the room. Also treat surfaces around light fixtures on porches, in garages, around shrubbery, and other places where these insects alight or congregate.

WOOD-INFESTING INSECTS (including termites*): For Beetles (Furniture, Deathwatch, False powderpost, Longhorned, Powderpost), Carpenter Ants (and other wood-infesting ants), Carpenter bees and Termites (including dry-wood termites):

Treat outside surfaces of buildings, porches, wooden decks and patios, wooden fences, window frames, doorways, foundations, eaves, patios, garages, garbage areas and other areas where you may find these pests.

Mix 7³/₄ fl. ozs. with 1 gallon of water to treat 100 sq. ft. Spray infested surfaces until thoroughly wet, avoiding dripping and runoff. Apply evenly on wood surfaces. To treat small areas, apply by brushing or spraying the diluted spray. For large areas, use a coarse, low pressure spray. Do not spray into electrical outlets or utilities.

Spray infested areas and areas likely to be infested, such as wood surfaces, voids and channels in damaged wood, spaces between wooden parts of a structure, and between wood and foundations where infestation is likely to occur, also around fenceposts, wood piles (do not use on firewood) and tree stumps.

Suitable protective clothing should be worn in confined or overhead areas to prevent exposure to eyes and skin. The use of eye protection, protective head covering, chemical resistant gloves and footwear, a long-sleeved shirt and long pants or coveralls are recommended. Do not permit contact with treated surfaces until spray has dried. Treated confined areas, such as detached garages, under porches and decks, should be ventilated during and immediately following application before the areas are re-occupied.

For carpenter ants, spray around doors and windows and other places where ants may enter

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or crawl and hide. Also treat cracks and crevices or openings into wall voids or other areas where these ants may be present. **For carpenter bees**, spray or inject into holes and tunnels already made by the bees with a tank sprayer, and spray areas where they are beginning to build tunnels into the wood. **For Termites* [including dry-wood termites]**: treat as for other wood-infesting insects. This product will kill workers and winged reproductive forms of termites in the treated areas.

*The purpose of such applications of Permethrin 3.2 E.W.C. for termites is to kill workers or winged reproductive forms which may be present in treated channels at the time of treatment. Such applications are not a substitute for mechanical alteration, soil treatment, or foundation treatment but are merely a supplement. This product is not recommended as sole protection against termites. For active indoor termite infestations, get a professional inspection.

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HOUSE PLANTS

INDOORS: TO PROTECT PLANTS IN RESIDENTIAL GREENHOUSES AND LATHHOUSES AND FOR INDOOR LANDSCAPING:

House Plants	Pests	How to Use
Ageratum, Ardisia, Aster, Baby's Breath, Begonia, Birdsnest Fern, Bleeding Heart, Carnation, Chrysanthemum, Coleus, Crown of Thorns, Cockscomb, Cyclamen, Dracaena, Dumbcane, English Ivy, Fuchsia, Gladiolus, Grape Ivy, Juniper, Lily, Marigold, Orchid, Palm, Pansy, Peperomia, Petunia, Philodendron, Piggy-Back Plant, Poinsettia, Portulaca, Pothos, Prayer Plant, Purple Passion, Rabbits Foot Fern, Rose, Schefflera, Snapdragon, Snake Plant, Statice, Velvet Plant, Verbena, Zinnia	Aphids, Armyworms, Corn earworms, Exposed thrips, Fall cankerworms, Inchworms, Japanese beetles, Leafminers, Leafrollers, Mealybugs, Scales, Solder mites, Spring cankerworms, Whiteflies	Mix ¾ fl. oz. in 1 gal. of water. Contact and residual: Use sufficient spray to obtain full coverage of all foliage. If application is to be made indoors, remove infested plants from living areas prior to application. Use in an area not likely to be occupied by people or pets (particularly fish). After spraying, plants can be returned to original location. Do not use more product than recommended, as this may cause some plant injury. Use with care on ferns, palms and fuchsia. As with all plants listed, especially carnations, chrysanthemums, and roses, there exists a wide variety of species and cultivars, and therefore, a wide variety of susceptibility to injury. To ascertain possible phytotoxicity, treat a few plants as described above, wait 24 hours, and check for possible injury.
Velvet Plants	Fungus Gnats	

Fire Ant Control

Individual Mound and Plant Container Treatment

Mix 4¾ fl. oz. in 3 gals. of water and apply as a drench using a sprinkler can. Gently apply 1 gallon of the mixture over the surface of each mound. Thoroughly wet mound and surrounding area of 3x4 ft. (12 sq. ft.). For best results apply in cool weather 65°-80°F. early or late in the day. Treat new mounds as they appear. Pressurized sprays may disturb ants and cause migration which will reduce product effectiveness. **Use the same method as above for the control of Fire Ants that may nest in permanently placed containerized ornamentals plants**

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**ANIMALS AND ANIMAL PREMISE USE
CATTLE BARNS, SWINE HOUSES, MILK ROOMS, POULTRY
HOUSES, HORSE BARNS, DAIRIES, MILKING PARLORS, FEED LOTS,
STABLES, PADDOCKS.**

For initial clean up of severe insect infestation, dilute at a rate of (1) part concentrate in 6 parts water (21 ounces per gallon) (0.5%). For normal infestations dilute (1) part concentrate in 32 parts water (4 ounces per gallon of water) (0.1%).

PESTS ON FARM PREMISES (Barns, Dairies, Loafing Sheds, Milking Parlors, Feedlots, Stables, Paddocks, Poultry and Livestock Housing)		
PESTS	DILUTIONS (Mix Well)	HOW TO APPLY
Horseflies, Stableflies, lesser Houseflies and other manure breeding flies, Fleas, Lice, Mites, Ticks, including Deer tick (carrier of Lyme disease). Aids in control of Cockroaches, Mosquitoes and Spiders.	Dilute 4 ozs. in 1 gal. water Dilute 1pt. in 4 gals. water Dilute 1qt. in 8 gals. water Dilute 1 gal. in 32 gals. of water	Spray walls and surfaces thoroughly but do not allow runoff to occur; about 1 gal. per 750-1000s sq. ft. Treat no more often than once every 2 weeks. Do not contaminate animals feed or water by spray. Do not use in milk rooms.
PESTS IN CATTLE BARNS, HORSE BARNS, SWINE HOUSES, MILKING PARLORS, MILK ROOMS, DAIRIES, POULTRY HOUSES, FEEDLOTS STABLES AND PADDOCKS		
PESTS	DILUTIONS (Mix Well)	HOW TO APPLY
Flies, Mosquitoes and Gnats	Dilute 4 ozs. in 1 gal. water Dilute 1pt. in 4 gals. water Dilute 1qt. in 8 gals. water Dilute 1 gal. in 32 gals. of water	FOG OR FINE MIST: Apply, directing the spray toward the ceiling and upper corners until the area is filled with mist. Use about 2 ounces per 1000 cubic feet of space. For best results, close doors and windows before spraying and keep closed for 10-15 minutes. Remove animals prior to treatment, ventilate before reoccupying.
PESTS ON LARGE ANIMALS (Dairy or Beef Cattle, Horses, Sheep and Goats)		
PESTS	DILUTIONS (Mix Well)	HOW TO APPLY
Faceflies, Hornflies, Stableflies, Mosquitoes, Lice, Mites, Ticks, including Deer tick (carrier of Lyme disease)	Dilute 0.5 ozs. in 1 gal. water Dilute 1pt. in 32 gals. water Dilute 1qt. in 64 gals. water Dilute 1 gal. in 256 gals. of water	Spray to thoroughly cover entire animal. Spray lactating dairy cows only after milking is completed. Repeat treatment at 5 to 12 days for small populations or as needed for large populations.
Stableflies, Horse Flies and Deer Flies	Dilute 25 ozs. in 50 gals. water Dilute 3 pts. in 100 gals. water Dilute 3 qts. in 200 gals. water	Apply a quart of spray solution per adult animal as a whole body treatment, Repeat treatment daily as needed.

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Hornflies, Faceflies, Stableflies, Ear Ticks	Dilute 6.25 ozs. in 1 gal. oil or water Dilute 1.5 pts. in 4 gals. oil or water Dilute 3 pts. in 8 gals. oil or water	SPOT TREATMENT – LOW PRESSURE SPRAY For spot treatments with hand-operated sprayers that deliver Large droplets. Apply to the face of animal in the morning before release to Pasture. Mix in organic oil, mineral Oil or vegetable oil, or dilute with water. Apply ½ oz. per ear or 2 to 4oz. on face or 12-16oz. along the backline. Repeat treatment daily as needed.
Hornflies, Faceflies, Stableflies, Ear Ticks	Dilute 25 ozs. in 5 gals. oil Dilute 3pt. in 10 gals. oil Dilute 3qt. in 20 gals. oil	Back rubber or self-oiler using organic oil Oil, mineral oil or fuel oil. Recharge Back rubber as needed.
Sheep Keds	Dilute 25 ozs. in 6.25 gals. water Dilute 3 pt. in 12.5 gals. water Dilute 3 qt. in 25 gals. water	Wet all portions of the body by dipping Or spraying. Adjust the spray pressure to allow the spray solution to penetrate the wool. Treat at a rate sufficient to wet the animal.
PESTS ON SWINE AND POULTRY (Do not ship swine for slaughter within 5 days of last treatment)		
PESTS	DILUTIONS (Mix Well)	HOW TO APPLY
Mange Mites	Dilute 4 ozs. in 1 gal. water Dilute 1pt. in 4 gals. water Dilute 1qt. in 8 gals. water Dilute 1 gal. in 32 gals. of water	Spray, dip or sponge animals. Retreat after 14days, spraying walls and floor space and bedding to kill later hatching, developing stages.
Blowflies, Flies, Mosquitoes, Hog Lice, Fleas, Ticks, including Deer tick (carrier of Lyme disease)	Dilute 4 ozs. in 1 gal. water Dilute 1pt. in 4 gals. water Dilute 1qt. in 8 gals. water Dilute 1 gal. in 32 gals. of water	Spray, dip or sponge to apply 1 pint per pig, especially around ears.
Poultry Mites, Northern Fowl, Mites & Lice	Dilute 2 ozs. in 1 gal. water Dilute 1pt. in 8 gals. water Dilute 1qt. in 16 gals. water Dilute 1 gal. in 64 gals. of water	Spray at the rate of ½oz. per bird, or 1gal per 100 birds, with a fine mist. Spray roosts, walls and nests or cages.

INDOOR USE AREAS

To prepare dilutions, the concentrate should first be stirred or agitated. Add the required amount of concentrate to water and blend thoroughly. Do not hold dilutions for more than 24 hours.

For maximum effectiveness, a combination of localized application and space treatment is recommended. Remove pets, birds and cover fish aquariums before spraying.

For initial clean up of severe insect infestation, dilute at a rate of (1) part concentrate in 6 parts water (21 fluid ounces per gallon) (0.5%). For normal infestations dilute (1) part concentrate in 32 parts water (4 fluid ounces per gallon) (0.1%).

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HOMES, AND THE NONFOOD/FEED AREAS OF BAKERIES, BEVERAGE PLANTS, CANNERIES, FLOUR MILLS, FOOD PROCESSING PLANTS, GRAIN ELEVATORS, GRAINARIES, HOSPITALS (non-occupied areas), HOTELS, MOTELS, INDUSTRIAL INSTALLATIONS, MEAT PACKING PLANTS, OFFICE BUILDINGS, RAILROAD CARS, RESTAURANTS, SCHOOLS, SHIPSHOLDS, SUPERMARKETS, TRUCK TRAILERS, WAREHOUSES.

Do not use in food/feed handling establishments, restaurants or other areas where food/feed is commercially prepared or processed. Do not use in serving areas while food is exposed or facility is in operation. Serving areas are areas where prepared food is served such as dining rooms but excluding areas where food may be prepared or held. In the home, all food processing surfaces and utensils should be covered during treatment or thoroughly washed before use. Exposed food/feed should be covered or removed.

Non-food/feed areas of food/feed manufacturing, processing, and handling establishments are areas such as garbage rooms, lavatories, floor drains (to sewers), entries and vestibules, offices, locker rooms, machine rooms, boiler rooms, garages, mop closets and storage (after canning or bottling).

Do not apply to classrooms when in use. Do not apply product in occupied patient rooms or any rooms while occupied by the elderly or infirm.

Not for use in Federally Inspected Meat and Poultry Plants.

As a surface spray to control cockroaches, waterbugs, palmetto bugs, ants, silverfish, beetles, mites, weevils: Use a good sprayer and adjust to deliver a coarse, wet spray. Direct the spray into hiding places, cracks and crevices, under pallets, around containers of stored foods, around the base of machinery, and behind shelves and drawers. Spray bookcases for silverfish. Spray ant trails, nests and points of entry. If surface application only is to be used, spray floors, walls and other surfaces, applying at a rate of (1) gallon to 750 square feet of surface.

To control fleas and ticks (adult and larvae), thoroughly spray infested areas, pet beds, resting quarters, nearby cracks and crevices, along and behind baseboards, molding, window and door frames, and localized areas of floor and floor covering. Fresh bedding should be placed in animal quarters following treatment. Apply with mechanical or compressed air equipment (non-thermal), adjusted to deliver a fine mist. Close doors and windows and shut off ventilating systems.

For rapid control of house flies, fruit flies, gnats, mosquitoes, skipper flies, wasps, hornets, bees, black flies, angoumois grain moths and tobacco moths, SPACE SPRAY - direct spray at an upward angle, disturbing it uniformly through the entire area at a rate of (1) ounce per 1000 cubic feet of space. Keep area closed for at least 10 minutes. Vacate area after treatment and ventilate and sweep up dead insects before occupying.

For rapid kill of exposed or accessible stages of other insects named on this insert: Apply using conventional mechanical or compressed air equipment (non-thermal), following directions for space spraying in the paragraph above. Apply the above dilutions at a rate of (1) ounce per 1000 cubic feet of space.

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STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

Storage and Spill Procedures: Store upright at room temperature. Avoid exposure to extreme temperatures. In case of spillage or leakages, soak up with an absorbent material such as sand, sawdust, earth, Fuller's earth, etc. Dispose of with chemical waste.

Pesticide Disposal: Pesticide, spray mixture or rinse water that cannot be used according to label instructions must be disposed of at or by an approved waste disposal facility.

Container Disposal:

For Containers equal to or less than 5 Gallons : Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling if available. If recycling is not available: then dispose of container in a sanitary landfill or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

For Containers greater than 5 Gallons: Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling if available. If recycling is not available: then dispose of container in a sanitary landfill or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

For Bulk containers: (Refillable Container) Refill this container with pesticides only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the re-filler. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or re-circulate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this procedure two more times.

[NOTE: Buyer assumes all risks of use, storage or handling of this product not in strict accordance with label DIRECTIONS.]

LIMITATION OF WARRANTY AND LIABILITY

Read the entire direction for use, conditions of warranties and limitations of liability before using this product. If terms are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following CONDITIONS, DISCLAIMER OF WARRANTIES, and LIMITATIONS OF LIABILITY.

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risk associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of

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such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Control Solutions, Inc. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: To the extent consistent with applicable law, Control Solutions, Inc. makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of Control Solutions, Inc. is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, Control Solutions, Inc. disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

LIMITATIONS OF LIABILITY: To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at Control Solutions, Inc election, the replacement of product.[Optional Statement]

Manufactured For:
CONTROL SOLUTIONS, INC.
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